REMARKS

Applicant respectfully requests re-consideration of the application in view of the amendments and the arguments presented below.

Summary of Office Action

Claims 1-22 are pending.

Claims 6 and 8 were objected to.

Claims 1-7, 10-18, and 20 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,674,845 B2 of Ayoub, et al. ("Ayoub") in view of U.S. Patent No. 6,990,191 B2 of Anderson, et al. ("Anderson") and further in view of U.S. Patent No. 6,735,302 B1 of Caine, et al. ("Caine").

Claims 8 and 19 were rejected under 35 U.S.C. § 103 as being unpatentable over Ayoub, Anderson, and Caine, and further in view of U.S. Patent No. 5,835,533 of Booth, et al. ("Booth").

Claims 21-22 were rejected under 35 U.S.C. § 103 as being unpatentable over Ayoub, Anderson, and Caine, and further in view of U.S. Patent No. 6,226,331 B1 of Gambuzza ("Gambuzza").

Claim 9 was indicated as being allowable if re-written.

Summary of Amendments

Claims 1, 6, and 8 were amended. Support for the amendments may be found in the application including the specification, figures, and claims as originally filed. For example, support for the amendments may be found at Figures 7A-7B of the drawings and page 17, line 14 through page 19, line 15 of the specification. Applicant respectfully submits that the claim amendments do not introduce new matter.

Response to Claim Objections

Claims 6 and 8 were objected to. Applicant appreciates the Examiner's thorough review which identified the indicated errors. Applicant has amended claims 6 and 8 to correct the error noted by the Examiner. Applicant respectfully submits that the claim objections have been overcome.

Response to 35 U.S.C. § 103 rejections

Claims 1-7, 10-18, and 20 were rejected as being unpatentable over Ayoub, Anderson, and Caine. Applicant submits claims 1-7, 10-18, and 20 are patentable in view of the cited references. In particular, the cited references alone or in combination, fail to teach or suggest: *a) a first driver for driving a downstream data signal in a non-voiceband range and a metering signal onto a subscriber line; b) a second driver for driving a downstream voice signal in a voiceband range onto the subscriber line, wherein the second driver is distinct from the first driver; and c) receiver circuitry coupled to provide an upstream data signal and an upstream voice signal from an upstream signal carried by the subscriber line, wherein the first driver and receiver circuitry reside on the same first integrated circuit die.*

With respect to Ayoub, the Examiner has stated that Ayoub teaches a subscriber line interface circuit (SLIC) comprising:

> a first driver (112) in a non-voiceband range;
> a second driver (116) in a voiceband range onto the subscriber line; and
> receiver circuitry coupled to provide an upstream data signal (108) and an upstream voice signal (103) from an upstream signal carried by the subscriber line [Fig. 1; col. 1, line 52 to col. 2, line 9; col. 2, line 61 to col. 4, line 13; col. 4, lines 60-64]

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Applicant traverses the Examiner's characterization of Ayoub. Ayoub does not teach or suggest receiver circuitry coupled to provide an upstream voice data signal and an upstream voice signal from an upstream signal carried by the subscriber line. The Examiner's own citations point only to downstream drivers and downstream communications. There is no teaching of a receiver

circuitry nor is there any disclosure of extracting upstream data signals and upstream voice signals from the subscriber line.

The Examiner's remark regarding the obviousness of configuring the SLIC architecture further in order to accommodate any configurations involving upstream and downstream subject to circuit, system, and design constraints falls short of meeting the requirements of a prima facie obviousness rejection. The reference does not teach or suggest a receiver for upstream signals nor does the reference teach or suggest combining such receiver with a driver for driving metering and downstream data signals onto the same integrated circuit. As noted by the Examiner, the reference does not disclose metering nor does the reference disclose the claimed receiver and driver residing on the same integrated circuit die.

Anderson was cited merely for teaching a metering signal. Anderson discloses utilizing the *same* driver circuitry (230/235) for downstream voice, metering, and data (from SUM block 250). Although the Examiner has proposed combining Anderson and Ayoub, the Examiner has not unambiguously indicated whether the metering signal is being added to Ayoub or otherwise how Anderson and Ayoub are being combined. For example, is the Examiner proposing that the combination would split Anderson's single driver into two drivers on the same integrated circuit die? Which of Ayoub's/Anderson's drivers would then receive the metering signal?

The Examiner has introduced Caine merely for the teaching of implementing some SLIC functions on an integrated circuit die, however, Caine is notably missing any discussion of metering or downstream data signals. Indeed, Caine is drawn exclusively to handling voiceband signals. The absence of these elements is hardly support for the Examiner's obviousness argument regarding their inclusion.

None of the references alone or combined teaches or suggests a first driver for driving a downstream data signal in a non-voiceband range and a metering signal onto a subscriber line; a second driver for driving a downstream voice signal in a voiceband

range onto the subscriber line, wherein the second driver is distinct from the first driver; and receiver circuitry coupled to provide an upstream data signal and an upstream voice signal from an upstream signal carried by the subscriber line, wherein the first driver and receiver circuitry reside on the same first integrated circuit die.

In contrast, claim 1 includes the language:

> 1. A subscriber line interface circuit apparatus, comprising:
> *a first driver for driving a downstream data signal in a non-voiceband range and a metering signal onto a subscriber line;*
> *a second driver for driving a downstream voice signal in a voiceband range onto the subscriber line, wherein the second driver is distinct from the first driver; and*
> *receiver circuitry coupled to provide an upstream data signal and an upstream voice signal from an upstream signal carried by the subscriber line, wherein the first driver and receiver circuitry reside on a same first integrated circuit die.*

(Claim 1, as amended)(*emphasis added*)

Thus claim 1 is patentable under 35 U.S.C. § 103 in view of the cited references.

Similar arguments may be made with respect to claim 12. In particular, applicant submits that the references, alone or combined *does not teach or suggest the first driver and receiver circuitry residing on the same first integrated circuit die exclusive of the second driver circuitry*.

In contrast, claim 12 includes the language:

> 12. A subscriber line interface circuit apparatus, comprising:
> *first driver circuitry for combining and driving a downstream data signal and a metering signal onto a subscriber line;*
> *second driver circuitry for driving a downstream voice signal onto the subscriber line; and*
> *receiver circuitry for receiving and separating an upstream signal from the subscriber line into an upstream voice signal and an upstream data signal, wherein the first driver circuitry and the receiver circuitry reside on a same first integrated circuit die exclusive of the second driver circuitry.*

(Claim 12, as amended)(*emphasis added*)

Thus claim 12 is patentable under 35 U.S.C. § 103 in view of the cited references.

Claims 8, 19, and 21-22 were rejected under 35 U.S.C. § 103 in view of various combinations of Ayoub, Anderson, Caine, Booth, and Gambuzza. Applicant submits, however, that claims 8, 19, and 21-22 are dependent claims. Booth and Gambuzza, however, do not make up for the deficiencies of the remaining references as already argued with respect to independent claims 1 and 12.

Given that claims 2-11 depend from claim 1 and claims 13-22 depend from claim 12, applicant submits that claims 2-11 and 13-22 are likewise patentable under 35 U.S.C. § 103.

Applicant submits that the 35 U.S.C. § 103 rejections have been overcome.

Conclusion

In view of the amendments and arguments presented above, applicant respectfully submits the applicable rejections and objections have been overcome. Accordingly, claims 1-22 should be found to be in condition for allowance.

If there are any issues that can be resolved by telephone conference, the Examiner is respectfully requested to contact the undersigned at **(512) 858-9910**.

Respectfully submitted,

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William D. Davis
Reg No. 38,428